



Managing profiles for efficient backups

SnapManager Oracle

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Managing profiles for efficient backups

You must create a profile in SnapManager for the database on which you want to perform an operation. You must select the profile and then select the operation that you want to perform.

Tasks related to profiles

You can perform the following tasks:

- Create profiles to enable full or partial backups and backups to primary or secondary storage.

You can also create profiles to separate the archive log backups from the data file backups.

- Verify profiles.
- Update profiles.
- Delete profiles.

About profiles and authentication

When you create a profile, you can specify a database and choose one of the following methods to connect to the database:

- Oracle authentication with a user name, password, and port
- Operating system (OS) authentication with no user name, password, or port.

For OS authentication, you must enter the OS account user and group information.

- Database authentication when `sqlnet.authentication_services` is set to `NONE`. SnapManager then uses the database user name and password for all the connections to the target database. SnapManager can also use the Windows native authentication when `sqlnet.authentication_services` is set to `NTS`.

You can set `sqlnet.authentication_services` to `NONE` only in the following environments:

Database layout	Oracle version	Is database authentication supported for the target database
Any non-ASM and non-RAC database	Oracle 10g and Oracle 11g (lesser than 11.2.0.3)	Yes

Note: After you disable `sqlnet.authentication_services` and change the authentication method to database authentication, you must set `sqlnet.authentication_services` to `NONE`.

If you are accessing a profile for the first time, you must enter your profile password. After you enter your credentials, you can view the database backups within the profile.

Related information

[What profiles are](#)

Creating profiles

When creating profiles, you can assign a particular Oracle database user account to the profile. You can set the retention policy for the profile, and set the retention count and duration for each retention class.

If you do not provide the values of the `-login`, `-password`, and `-port` parameters of the database, the operating system (OS) authentication mode uses the default credentials.

While creating a profile, SnapManager performs a restore eligibility check to determine the restore mechanism that can be used to restore the database.

SnapManager (3.2 or later) enables you to separate archive log files from the data files while creating a new profile or updating an existing profile. After you have separated the backup using the profile, you can either create only the data files-only backup or archive log-only backup of the database. You can use the new profile or the updated profile to create the backup containing both the data files and archive log files. However, you cannot use the profile to create the full backup or revert the settings.

Profiles for creating full and partial backups

You can create profiles to create the full database backup containing the data files, control files, and archive log files and partial database backup containing specified data files or tablespaces, all the control files, and all the archive log files. SnapManager does not allow you to create separate archive log backups using the profiles created for full and partial backups.

Profiles for creating data files-only backups and archivelogs-only backups

When you create a new profile, you can include `-separate-archivelog-backups` to separate the archive log backup from the data file backup. You can also update the existing profile to separate the archive log backup from the data file backup.

By using the new profile options to separate the archive log backups, you can perform the following SnapManager operations:

- Create an archive log backup
- Delete an archive log backup
- Mount an archive log backup
- Free an archive log backup

While creating the profile to separate archive log backups from the data files backup, if the archive log files do not exist in the database for which the profile is created, then a warning message Archived log file does not exist in the active file system. The archived log file versions earlier than the `<archive log thread version>` log file will not be included in the backup is displayed. Even if you create backups for this database, the archive log files are not available in the database backups.



If you encounter an error while creating a profile, use the `smosystem dump` command. After you create a profile, if you encounter an error, use the `smooperation dump` and `smoprofile dump` commands.

1. To create a profile with a user name, password, and port (Oracle authentication), enter the following command: `smo profile create -profileprofile [-profile-passwordprofile_password] -repository -dbnamerepo_dbname-hostrepo_host-portrepo_port-login-usernamerepo_username-database`

-dbnamedb_dbname-hostdb_host [-siddb_sid] [-login-usernamedb_username-passworddb_password-portdb_port] [-rman {-controlfile | {-login-usernamerman_username-passwordrman_password-tnsnamerman_tnsname} }] [-retain [-hourly [-countn] [-durationm]] [-daily [-countn] [-durationm]] [-weekly [-countn] [-durationm]] [-monthly [-countn] [-durationm]]] [-commentcomment][[-snapname-patternpattern]][-summary-notification] [-notification [-success-emailemail_address1, email_address2-subjectsubject_pattern] [-failure-emailemail_address1, email_address2-subjectsubject_pattern]][-separate-archivelog-backups-retain-archivelog-backups-hourshours | -daysdays | -weeksweeks| -monthsmonths [-include-with-online-backups | -no-include-with-online-backups]] [-dump]

Other options for this command are as follows:

[-force] [-noprompt]

You can also include other options when creating profiles, depending on how you want to access the database.

If...	Then...
You want to use database authentication to create a profile	Specify the database login details.
You want to specify a backup retention policy for backups	<p>Specify either the retention count or duration for a retention class, or both. The duration is in units of the class (for example, hours for hourly, days for daily).</p> <ul style="list-style-type: none"> • -hourly is the hourly retention class, for which [-count n] [-duration m] are the retention count and retention duration, respectively. • -daily is the daily retention class, for which [-count n] [-durationm] are the retention count and retention duration, respectively. • -weekly is the weekly retention class, for which [-count n] [-duration m] are the retention count and retention duration, respectively. • -monthly is the monthly retention class, for which [-count n] [-durationm] are the retention count and retention duration, respectively.

You want to enable email notification for the completion status of the database operations

Specify the following options and variables:

- -summary-notification enables you to configure a summary email notification for multiple profiles under a repository database.
- -notification enables you to receive an email notification for the completion status of the database operation for a profile.
- -success-emailemail_address2 enables you to receive an email notification on the successful database operation performed by using a new or existing profile.
- -failure-emailemail_address2 enables you to receive an email notification on the failed database operation performed by using a new or existing profile.
- -subjectsubject_text specifies the subject text for the email notification while creating a new profile or an existing profile. If the notification settings are not configured for the repository and you try to configure profile or summary notifications by using the CLI, the following message is logged in the console log: SMO-14577: Notification Settings not configured.

If you have configured the notification settings and you try to configure summary notification by using the CLI without enabling summary notification for the repository, the following message is shown in the console log: SMO-14575: Summary notification configuration not available for this repository**

<p>You want to backup archive log files separately from data files</p>	<p>Specify the following options and variables:</p> <ul style="list-style-type: none"> • <code>-separate-archivelog-backups</code> enables you to separate the archive log backup from the datafile backup. • <code>-retain-archivelog-backups</code> sets the retention duration for archive log backups. You must specify a positive retention duration. <p>The archive log backups are retained based on the archive log retention duration. The data files backups are retained based on the existing retention policies.</p> <ul style="list-style-type: none"> • <code>-include-with-online-backups</code> includes the archive log backup along with the online database backup. <p>This option enables you to create an online data files backup and archive logs backup together for cloning. When this option is set, whenever you create an online data files backup, the archive logs backups are created along with the data files immediately.</p> <ul style="list-style-type: none"> • <code>-no-include-with-online-backups</code> does not include the archive log backup along with database backup.
<p>You can collect the dump files after the successful profile create operation</p>	<p>Specify the <code>-dump</code> option at the end of the profile create command.</p>

Related information

[How to collect dump files](#)

Snapshot copy naming

You can specify a naming convention or pattern to describe the Snapshot copies related to the profile you create or update. You can also include custom text in all Snapshot copy names.

You can change the Snapshot copy naming pattern when you create a profile or after the profile has been created. The updated pattern applies only to Snapshot copies that have not yet occurred; Snapshot copies that exist retain the previous snapname pattern.

The following examples show the two Snapshot copy names taken for a volume. The second Snapshot copy listed has `F_H_1` in the middle of its name. The "1" indicates that it is the first Snapshot copy taken in the backup set. The first Snapshot copy listed is the most recent and has a "2," which means it is the second Snapshot copy taken. The "1" Snapshot copy includes the datafiles; the "2" Snapshot copy includes the control files. Because the control file Snapshot copies must be taken after the data file Snapshot copy, two Snapshot

copies are required.

```
smo_profile_sid_f_h_2_8ae482831ad14311011ad14328b80001_0  
smo_profile_sid_f_h_1_8ae482831ad14311011ad14328b80001_0
```

The default pattern includes the required smid, as shown in the following:

- Default pattern: `smo_{profile}_{db-sid}_{scope}_{mode}_{smid}`
- Example: `smo_my_profile_rac51_f_h_2_8abc01e915a55ac50115a55acc8d0001_0`

You can use the following variables in the Snapshot copy name:

Variable name	Description	Example value
smid (Required)	The SnapManager unique ID is the only required element when creating a name for the Snapshot copy. This ID ensures that you create a unique Snapshot name.	8abc01e915a55ac50115a55acc8d0001_0
class (Optional)	Retention class associated with the backup for the profile and indicated by hourly (h), daily (d), weekly (w), monthly (m), or unlimited (u).	d
comment (Optional)	Comment associated with the backup for the profile. Spaces in this field will be converted to underscores when the Snapshot copy name is complete.	sample_comment_spaces_replaced
date (Optional)	Date that the backup occurs for the profile. Date values are padded with zeros if necessary. (yyyymmdd)	20070218
db-host (Optional)	Database host name associated with the profile being created or updated.	my_host
db-name (Optional)	Database name associated with the Snapshot copy you create.	rac5
db-sid (Optional)	Database sid associated with the Snapshot copy you create.	rac51
label (Optional)	Label associated with the backup for the profile.	sample_label

mode (Optional)	Specifies whether the backup is completed online (h) or offline (c).	h
profile (Optional)	Profile name associated with the backup you create.	my_profile
scope (Optional)	Specifies whether the backup is either full (f) or partial (p).	f
time (Optional)	Time that the backup occurs for the profile. Time values for this variable use the 24-hour clock and are padded with zeros if necessary. For example, 5:32 and 8 seconds appears as 053208 (hhmmss).	170530
time-zone (Optional)	Time zone specified for the target database host.	EST
usertext (Optional)	Custom text that you can enter.	prod

Note: SnapManager for Oracle does not support the colon (:) symbol in the long forms of the names for Snapshot copies.

Renaming profiles

SnapManager enables you to rename the profile when you update the profile. The SnapManager capabilities that are set on the profile and the operations that can be performed before renaming are retained for the renamed profile.

- You must ensure that there are no SnapManager operations running on the profile while renaming the profile.

You can rename the profile from both the SnapManager command-line interface (CLI) and graphical user interface (GUI). While updating the profile, SnapManager verifies and updates the profile name in the repository.



SnapManager does not support renaming the profile in the Multi-profile update window.

When you provide a new profile name, the new profile name is added in the client-side credential cache and the earlier profile name is removed. When you rename the profile from a client, the credential cache of only that client is updated. You need to execute the smo profile sync command from each of the clients to update the new credential cache with the new profile name.

You can set the password for the profile by using the smo credential set command.

If the profile name was included in a Snapshot copy naming pattern, when you rename a profile, the new name for the profile gets updated. All the SnapManager operations that are performed on the profile use the new profile name. The backups created with earlier profile continue to have the earlier profile name and are used to perform other SnapManager operations.

If you are performing rolling upgrade of SnapManager server hosts, you must ensure that you perform the complete upgrade before renaming the profile.

The new name for the profile is updated only from the SnapManager client from which the request is made. The SnapManager clients that are connected to the SnapManager server are not notified about the change in profile name. You can check the operation log to know about the change in the profile name.



If a scheduled backup operation begins at the time of renaming the profile, then the scheduled operation fails.

1. Enter the following command: `smo profile update -profileprofile [-new-profilenew_profile_name]`

Changing profile passwords

To protect the existing profiles in the repository, you should update the passwords for the profiles. You can apply this updated password when creating a backup using this profile.

1. To update the profile password for an existing profile, enter this command:

```
smo profile update -profile profile_name -profile-password password
```

Related information

[The smo profile update command](#)

Resetting the profile password

You can reset the profile password if you do not remember the password that you had provided while creating the profile.

- You must ensure that the SnapManager server is running on the repository database.
- You must have the local administrator credentials of the host on which the repository database is residing.
- You must ensure that the profile is not in use for any operation when the password is being reset for that profile.

You can reset the password from either the SnapManager CLI or GUI. While resetting the password, SnapManager queries the SnapManager server on the repository host to identify the operating system for the repository host. You must enter the authorized user credentials for connecting to the repository host. The SnapManager server authenticates users with their local administrator credentials on the repository database. When the authentication is successful, SnapManager resets the profile password on the SnapManager server with the new password.



SnapManager does not maintain the history of the password reset operations.

1. Reset the profile password by entering the following command: `smo password reset -profileprofile [-profile-passwordprofile_password] [-repository-hostadmin-passwordadmin_password]`

Authorizing access to profiles

SnapManager enables you to set a password for a profile to prevent unauthorized access.

1. Enter the following command: `smo credential set -profile -name profile_name [-password password]`

Related information

[The smo credential set command](#)

Verifying profiles

You can verify that an existing profile is set up correctly. When you verify a profile, SnapManager checks the environment for the profile you specify and verifies that the profile is set up and the database in this profile is accessible.

1. To verify if the profile is set up correctly, enter this command: `smo profile verify -profile profile_name`

Related information

[The smo profile verify command](#)

Updating profiles

You can update the profiles to modify the profile password, the number of backups to retain, access to the database, the operating system (OS) authentication to database authentication and vice versa, and information about the host. If the Oracle database password information changes, you must also change that information in the profile.

SnapManager (3.2 or later) enables you to update the profile to separate archive log backups from the data file backups by using the `-separate-archivelog-backups` option. You can specify separate retention duration for the archive log backup. SnapManager enables you to include the archive log backup along with online database backup. You can also create an online datafile backup and archive log backup together for cloning. When you create an online data files backup, the archive logs backups are immediately created along with the data files.

1. Enter the following command: `smo profile update -profileprofile [-new-profilenew_profile_name] [-profile-passwordprofile_password][-database-dbnamedb_dbname-host db_host [-siddb_sid] [-login -username db_username-password db_password-port db_port]] [{-rman{-controlfile | {-login -username rman_username-password rman_password-tnsname rman_tnsname}}}] | -remove-rman] [-retain [-hourly [-countn] [-durationm]] [-daily [-countn] [-durationm]] [-weekly [-countn] [-durationm]] [-monthly [-countn] [-durationm]]] [-commentcomment][-snapname-patternpattern] [-summary-notification] [-notification [-success-emailemail_address1, email_address2-subjectsubject_pattern] [-failure-emailemail_address1, email_address2-subjectsubject_pattern]] [-separate-archivelog-backups-retain-archivelog-backups-hourshours | -daysdays | -weekswweeks | -monthsmmonths] [-include-with-online-backups | -no-include-with-online-backups]] [-dump]`

Other options for this command are as follows:

`[-force] [-noprompt]`


If you want to...	Then...
<p>Change the backup retention policy for backups of the database in the profile</p>	<p>Specify either the retention count or retention duration for a retention class, or both to change the retention policy. The duration is in units of the class (for example, hours for hourly, days for daily).</p> <ul style="list-style-type: none"> • -hourly is the hourly retention class, for which [-countn] [-durationm]] are the retention count and retention duration, respectively. • -daily is the daily retention class, for which [-countn] [-durationm]] are the retention count and retention duration, respectively. • -weekly is the weekly retention class, for which [-countn] [-durationm]] are the retention count and retention duration, respectively. • -monthly is the monthly retention class, for which [-countn] [-durationm]] are the retention count and retention duration, respectively.

Enable email notifications for the completion status of the database operations

Specify the following options and variables:

- -summary-notification enables you to configure a summary email notification for multiple profiles under a repository database.
- -notification enables you to receive an email notification on the completion status of the database operation for a profile.
- -success-emailemail_address2 enables you to receive an email notification following the completion of a successful database operation performed by using a new or an existing profile.
- -failure-emailemail_address2 enables you to receive an email notification on a failed database operation performed by using a new or an existing profile.
- -subjectsubject_text specifies subject text for the email notification while creating a new profile or an existing profile. If the notification settings are not configured for the repository and you are trying to configure profile or summary notifications by using the command-line interface (CLI), the following message is logged in the console log: SMO-14577: Notification Settings not configured.

If you have configured the notification settings and you are trying to configure summary notification by using the CLI without enabling summary notification for the repository, the following message is logged in the console log: SMO-14575: Summary notification configuration not available for this repository**

<p>Update the profile to create backup of the archive log files separately</p>	<p>Specify the following options and variables:</p> <ul style="list-style-type: none"> • <code>-separate-archivelog-backups</code> enables you to create a backup of the archive log files separately from the database files. <p>After you specify this option, you can either create a data files-only backup or an archivelogs-only backup. You cannot create a full backup. Also, you cannot revert the profile settings by separating the backup. SnapManager retains the backups based on the retention policy for the backups that were created before taking archivelogs-only backup.</p> <ul style="list-style-type: none"> • <code>-retain-archivelog-backups</code> sets the retention duration for archive log backups. <div>  </div> <p>If you are updating the profile for the first time, you can separate the archive log backups from the data files backup by using the <code>-separate-archivelog-backups</code> option; you must provide the retention duration for the archive log backups by using the <code>-retain-archivelog-backups</code> option. Setting the retention duration is optional when you later update the profile.</p> <ul style="list-style-type: none"> • <code>-include-with-online-backups</code> specifies that the archive log backup is included along with the database backup. • <code>-no-include-with-online-backups</code> specifies the archive log file backup is not included along with the database backup.
<p>Change the host name of the target database</p>	<p>Specify <code>-hostnew_db_host</code> to change the host name of the profile.</p>
<p>Collect the dump files after the profile update operation</p>	<p>Specify the <code>-dump</code> option.</p>

2. To view the updated profile, enter the following command: `sno profile show`

Related information

[How to collect dump files](#)

Deleting profiles

You can delete a profile anytime, as long as it does not contain successful or incomplete backups. You can delete profiles that contain freed or deleted backups.

1. To delete a profile, enter this command: `smo profile delete -profile profile_name`

Related information

[The smo profile delete command](#)

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